

SEQUENCE LISTING

<110> TRANSGENE SA

<120> Polypeptide having an improved Cytosine deaminase activity

<130> D21447

<140>

<141>

<150> US 60/508 274

<151> 2003-10-06

<150> EP 03/360 087

<151> 2003-07-21

<160> 2

<170> PatentIn Ver. 2.1

<210> 1

<211> 373

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence :Fusion protein having a CDase activity

<300>

<400> 1

Met Val Thr Gly Gly Met Ala Ser Lys Trp Asp Gln Lys Gly Met Asp
1 5 10 15Ile Ala Tyr Glu Glu Ala Ala Leu Gly Tyr Lys Glu Gly Gly Val Pro
20 25 30Ile Gly Gly Cys Leu Ile Asn Asn Lys Asp Gly Ser Val Leu Gly Arg
35 40 45Gly His Asn Met Arg Phe Gln Lys Gly Ser Ala Thr Leu His Gly Glu
50 55 60Ile Ser Thr Leu Glu Asn Cys Gly Arg Leu Glu Gly Lys Val Tyr Lys
65 70 75 80Asp Thr Thr Leu Tyr Thr Thr Leu Ser Pro Cys Asp Met Cys Thr Gly
85 90 95

Ala Ile Ile Met Tyr Gly Ile Pro Arg Cys Val Val Gly Glu Asn Val

	100		105		110	
Asn Phe	Lys Ser Lys Gly Glu Lys Tyr Leu Gln Thr Arg Gly His Glu					
	115		120		125	
Val Val Val Val Asp Asp Glu Arg Cys Lys Lys Ile Met Lys Gln Phe						
	130		135		140	
Ile Asp Glu Arg Pro Gln Asp Trp Phe Glu Asp Ile Gly Glu Ala Ser						
	145		150		155	160
Glu Pro Phe Lys Asn Val Tyr Leu Leu Pro Gln Thr Asn Gln Leu Leu						
		165		170		175
Gly Leu Tyr Thr Ile Ile Ser Asn Lys Asn Thr Thr Arg Pro Asp Phe						
	180		185		190	
Ile Phe Tyr Ser Asp Arg Ile Ile Arg Leu Leu Val Glu Glu Gly Leu						
	195		200		205	
Asn His Leu Pro Val Gln Lys Gln Ile Val Glu Thr Asp Thr Asn Glu						
	210		215		220	
Asn Phe Glu Gly Val Ser Phe Met Gly Lys Ile Cys Gly Val Ser Ile						
	225		230		235	240
Val Arg Ala Gly Glu Ser Met Glu Gln Gly Leu Arg Asp Cys Cys Arg						
		245		250		255
Ser Val Arg Ile Gly Lys Ile Leu Ile Gln Arg Asp Glu Glu Thr Ala						
	260		265		270	
Leu Pro Lys Leu Phe Tyr Glu Lys Leu Pro Glu Asp Ile Ser Glu Arg						
	275		280		285	
Tyr Val Phe Leu Leu Asp Pro Met Leu Ala Thr Gly Gly Ser Ala Ile						
	290		295		300	
Met Ala Thr Glu Val Leu Ile Lys Arg Gly Val Lys Pro Glu Arg Ile						
	305		310		315	320
Tyr Phe Leu Asn Leu Ile Cys Ser Lys Glu Gly Ile Glu Lys Tyr His						
		325		330		335
Ala Ala Phe Pro Glu Val Arg Ile Val Thr Gly Ala Leu Asp Arg Gly						
	340		345		350	
Leu Asp Glu Asn Lys Tyr Leu Val Pro Gly Leu Gly Asp Phe Gly Asp						
	355		360		365	
Arg Tyr Tyr Cys Val						
	370					

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 <213> *Saccharomyces cerevisiae*

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 Met Ser Ser Glu Pro Phe Lys Asn Val Tyr Leu Leu Pro Gln Thr Asn
 1 5 10 15
 Gln Leu Leu Gly Leu Tyr Thr Ile Ile Ser Asn Lys Asn Thr Thr Arg
 20 25 30
 Pro Asp Phe Ile Phe Tyr Ser Asp Arg Ile Ile Arg Leu Leu Val Glu
 35 40 45
 Glu Gly Leu Asn His Leu Pro Val Gln Lys Gln Ile Val Glu Thr Asp
 50 55 60
 Thr Asn Glu Asn Phe Glu Gly Val Ser Phe Met Gly Lys Ile Cys Gly
 65 70 75 80
 Val Ser Ile Val Arg Ala Gly Glu Ser Met Glu Gln Gly Leu Arg Asp
 85 90 95
 Cys Cys Arg Ser Val Arg Ile Gly Lys Ile Leu Ile Gln Arg Asp Glu
 100 105 110
 Glu Thr Ala Leu Pro Lys Leu Phe Tyr Glu Lys Leu Pro Glu Asp Ile
 115 120 125
 Ser Glu Arg Tyr Val Phe Leu Leu Asp Pro Met Leu Ala Thr Gly Gly
 130 135 140
 Ser Ala Ile Met Ala Thr Glu Val Leu Ile Lys Arg Gly Val Lys Pro
 145 150 155 160
 Glu Arg Ile Tyr Phe Leu Asn Leu Ile Cys Ser Lys Glu Gly Ile Glu
 165 170 175
 Lys Tyr His Ala Ala Phe Pro Glu Val Arg Ile Val Thr Gly Ala Leu
 180 185 190
 Asp Arg Gly Leu Asp Glu Asn Lys Tyr Leu Val Pro Gly Leu Gly Asp
 195 200 205
 Phe Gly Asp Arg Tyr Tyr Cys Val
 210 215